

THE LEPIDOPTERA OF BROKEN HILL, NEW SOUTH WALES.
PART IV.

By OSWALD B. LOWER, F.Z.S., F.E.S., etc.

[Read October 10, 1918.]

This paper contains a supplementary list of species taken since the first part was published, together with those omitted, and a few new species. I also add the few Rhopalocera taken here.

Family ARCTIADAE.

Subfamily ARCTIANAE.

565. SPILOSOMA (?) COSMETA, Low.

Rather common in April and May; also occasionally from June to October. I have not yet seen the female, which is probably apterous.

Subfamily AGARISTIDAE.

566. COMOCRUS BEHRI, Angas.

One specimen, in March.

This species is known to most Australian collectors as *casuarinae*, Scott. It varies somewhat in the hindwing, as the yellow postmedian band may be broken into spots or entirely absent, as in the form *flexuosa*, Wlk.

NOCTUINA.

Subfamily AGROTINAE.

567. MELICEPTRIA ALEUROTA, Low.

Two specimens in March. The type came from Derby, Western Australia, which habitat was accidentally omitted in the original description (Proc. Linn. Soc. N.S. Wales, 1901, p. 641).

Subfamily CUCULLIANAE.

568. ARIATHISA EMBOLOMA, n. sp.

One specimen, in May.

Subfamily ACRONYCTIANAE.

569. EUPLEXIA MELANOPS, Low.

One specimen, at light, April.

570. APINA CALLISTO, Wlk.

Not uncommon during March and April. A rapid day flier. Exceedingly common in the larval state, destroying a large amount of low herbage. The larvae are very partial to the "Cape weed" (*Cryptostemma coronaria*), but a small clear-winged Ichneumon destroys huge numbers; out of seventy-five larvae I bred but three imperfect imagoes. The species is widely distributed throughout Australia.

571. IPANICA CORNIGERA, Butl.

Taken occasionally during October and November. This is another widely distributed species, its geographical range extending from this district to New Guinea.

Subfamily SARROTHRIPINAE.

572. ELESMA SUBGLAUCA, Wlk.

Two specimens, in March.

Subfamily NOCTUINAE.

573. SETIDA QUADRISIGNATA, Wlk.

Not uncommon, at light, September to November.

574. BYTURNA DIGRAMMA, Wlk.

Taken occasionally during March and April. The specimens taken here are generally much redder than those taken in South Australia.

Subfamily ERASTRIANAE.

575. TARACHE MICRASTIS, Low.

Two specimens, in March; also from Tennant Creek, South Australia, and Birchip, Victoria.

576. XANTHOPTERA OPELLA, Swinh.

Five specimens, in March and April; also taken at Birchip, Victoria.

Subfamily ACONTIANAE.

577. EARIAS FABIA, Stoll.

Rather common during September and October. I also take it freely at Wayville, South Australia. The markings vary from deep emerald-green to dull yellowish-fuscous.

578. ACONITA CONGENITA, Hmps.

Nine specimens, taken at dusk, in March. These were attracted to the flowers of the common "water melon." The type came from Queensland.

579. MAURILIA ICONICA, Wlk.

Four specimens, in March and April.

Subfamily CATOCALINAE.

580. OPHIDERES MATERNA, Linn.

Three specimens, in April. These were all taken at the same time at one of the city fruit stores.

581. GRAMMODES CALLIMERIS, Low.

Two specimens, in October. The type came from Cooktown, Queensland.

582. GRAMMODES CHRYSOMERA, Low.

Three specimens, in March, October, and December.

583. TRIGONODES HYPASIA, Cram.

Five specimens, in February and July. The specimens are much smaller than those from Brisbane, Queensland.

Subfamily HYPENIDAE.

584. GONITIS SABULIFERA, Gn.

Taken occasionally, March.

585. COSMOPHILA EROSA, Hb.

Not uncommon, during March, April, and May. The specimens taken here are much darker than those from India. It stands in some collections as *xanthindyma*, Bdv., and *indica*, Wlk.

GEOMETRINA.

Subfamily MONOCTENIADAE.

586. TAXEOTIS PHÆOPA, Low.

The female of this species is always smaller than the male. Usually taken during May and June, but I have secured specimens in September.

Subfamily SELIDOSEMIDAE.

587. AMELORA IDIOMORPHA, Low.

Two specimens, taken at light, in June and September.

588. CHLENIAS CYCLOSTICHA, Low.

One specimen (type), taken in June.

589. CHLENOMORPHA SCIOGRAMMA, n. sp.

One specimen, in November.

590. PAUROCOMA CONIOPA, n. sp.

One specimen, in May.

BOMBYCINA.

Subfamily LYMANTRIADAE.

591. APROSITA OBSCURA, Wlk.

Two male specimens, in October and November; also from Aldgate, South Australia. Dr. Turner named a specimen *Aprosita ulothrix* (type in South Australian Museum). Walker made it a *Trichiura*, Kirby makes it a *Clathe*, but for the present we will allow Turner's genus to stand to receive it.

Subfamily NOTODONTIDAE.

592. CAPUSA SENILIS, Wlk.

Three male specimens, in November. Almost certainly attached to *Casuarina*. Being an exceedingly swift flier, it is difficult to secure perfect specimens.

Subfamily ZEUZERIDAE.

593. ZEUZERA PERIGYPSA, Low.

One specimen, in March.

594. CULAMA CALIGINOSA, Wlk.

Three specimens, in April and May. The larvae feed in the roots of *Eucalypti*, and I have found pupae about 6 feet away from the trunk of the tree.

595. HECTOMANES NOSERODES, Meyr.

Five specimens, all males (at light), in March and April.

PYRALIDINA.

Subfamily PHYCITIDAE.

596. HOMOEOSOMA MELANOSTICTA, Low.

Three specimens, in October.

597. MYELOIS FLAVEOTINCTA, Lucas.

Not uncommon, especially at light, September to December. The perfect insects frequent the stunted plants of *Bassia*, and lie motionless on the stems or leaves; they are then difficult to discern on account of the blending of colour.

Subfamily PYRAUSTIDAE.

598. NOTARCHA CLYTALIS, Wlk.

Taken occasionally, in March and April.

599. *BOTYS PHOENICEALIS*, Hb.

Taken occasionally, in March.

600. *SEMIOCEROS (NACOLEIA) MESOCHLORA*, Meyr.

Rather common, in March and April.

Subfamily ENDOTRICHINAE.

601. *ENDOTRICHA PUNCTICOSTALIS*, Wlk.

Taken occasionally, in March and April, also September. The specimens are much darker, and more shapely marked than those from Queensland.

Subfamily PTEROPHORIDAE.

602. *SPHENARCHES CAFFER*, Zeller.

Taken occasionally, in March.

TORTRICINA.

Subfamily TORTRICIDAE.

603. *TORTRIX POSTVITTANA*, Wlk.

Several specimens, in March and April.

Subfamily EUCOSMIDAE.

604. *ARGYROFLOCE DOXASTICINA*, Meyr.

Not uncommon, in March and April. I have recently taken this species at Wayville, South Australia.

TINEINA.

Family OECOPHORIDAE.

605. *ZONOPETALA SYNARTHRA*, Meyr.

Three specimens, in November.

606. *LINOSTICHA (?) STICHOPTIS*, Low.

One specimen, in July.

607. *LINOSTICHA SERICOPA*, Low.

Two specimens (at light), in November.

608. *TRACHYNTIS MIMICA*, Low.

One specimen, in March.

609. *NEPHOGENES MACULISARCA*, Low.

Two specimens, in October.

610. *PHILOBOTA EREMOSEMA*, Low.

One specimen, in November.

611. *GUESTIA DELOSTICHA*, Low.

One specimen, in March.

612. *GUESTIA SYMMADELPHA*, Low.

One specimen, in May.

613. *PAURONOTA LASIOPREPES*, Low.

One specimen, in May.

614. *PSECADIA POSTICA*, Zeller.

Not uncommon, August and September. I have never taken this species except at light.

615. *OECOPHORA PSEUDOPRETELLA*, Stt.

Not uncommon, from December to March. A well-known European species.

616. *MACROBATHRA HEMITROPA*, Meyr.

Three specimens, September and October.

Family *XYLORYCTIDAE*.617. *XYLORYCTA PARTHENISTIS*, Low.

Two specimens, in November.

In the original description (Trans. Roy. Soc. S. Austr., 1902, p. 237) the habitat was omitted. It should be:—*Hab.*: Tennant Creek, Central Australia, taken in October.

Family *GELECHIADAE*.618. *ARISTOTELIA HEMISARCA*, Low.

Several specimens, in March and April.

RHOPALOCERA.Family *PAPILIONIDAE*.619. *PAPILIO STHENELUS*, Macl.

Not uncommon, October to May.

620. *PAPILIO AEGEUS*, Don.

Two specimens, in November.

621. *PAPILIO ANACTUS*, Macl.

One specimen, in October.

Subfamily PIERIDAE.

622. TERIAS SMILAX, Don.

Taken occasionally, October to March.

623. CALLIDRYAS PYRANTHE, Linn.

Taken occasionally, in October.

624. ANAPHAEIS TEUTONIA, Fab.

Rather common, October to December.

625. DELIAS AGANIPPE, Don.

Fairly common, October to January.

Subfamily DANAIDAE.

626. DANAIS PETILIA, Stoll.

Rather common, during November to March.

627. DANAIS ERIPPUS, Cram.

Rather scarce, April.

Subfamily NYMPHALIDAE.

628. PYRAMEIS KERSHAWI, McCoy.

Common, during October and November.

629. PYRAMEIS ITEA, Fab.

Not uncommon, September to March.

630. JUNONIA VELLIDA, Fab.

Tolerably common, September to December.

Subfamily LYCAENIDAE.

631. LYCAENA BIOCELLATA, Feld.

Common, September to March.

632. LYCAENA SERPENTATA, Herr Sch.

Not uncommon, October and November.

633. LYCAENA LABRADUS, Godt.

Not uncommon, October to December.

634. OGYRIS OROETES, Hew.

Taken occasionally, in November. Frequents the flowers of *Eremophila Sturtii*.

NOCTUINA.

Subfamily CUCULLIANAE.

ARIATHISA EMBOLOMA, n. sp.

♀, 40 mm. Head and thorax dark fuscous, head mixed with whitish, centre of thorax and patagia white. Antennae fuscous. Palpi whitish, terminal joint short, fuscous. Abdomen grey-whitish, beneath white. Legs grey-whitish, tarsi fuscous, ringed with whitish. Forewings elongate-triangular, costa straight, termen oblique, gently waved throughout; dark fuscous, wing between base and first line strongly mixed with whitish, sometimes mixed with pale rufous; first line strongly waved, white, edged throughout by a blackish shade, from one-quarter of costa to about one-third of dorsum; second line rather broad, waved, with a broad median projection, rather obscure in one specimen, black, more or less narrowly edged throughout with white; wing below cell between first and second lines strongly mixed with rufous, but not reaching dorsum; orbicular snow-white, centred with black; reniform black, edged anteriorly with white; cell more or less filled in with black; subterminal line strongly dentate, snow-white, from costa near apex to tornus, edged anteriorly and in one specimen posteriorly, with lanceolate black marks, which are well marked, space between second and subterminal lines strongly mixed with rufous, except at reniform, where it is suffusedly whitish; a series of four white dots on posterior half of costa; a black line along termen with a series of somewhat lunulate spots between veins; cilia grey, rufous-tinged with a rufous median line. Hindwings light smoky-fuscous, paler on basal half; line along termen as in forewings, cilia snow-white with a grey median line.

Not unlike some specimens of *Euxoa radians*, Guen.

Hab.—Pinnaroo, South Australia; two specimens, in May and June. Broken Hill, New South Wales; one specimen, in May.

GEOMETRINA.

Subfamily SELIDOSEMIDAE.

CHLENOMORPHA, n. gen.

Face with appressed scales. Palpi long, porrected, two and a half times width of eye, terminal joint short. Antennae of male bipectinated, apex simple. Thorax without crest. Posterior tibiae somewhat dilated. Forewings with small fovea; 10 free, 12 anastomosing with 11. Hindwings normal.

A curious genus, apparently related to *Chlenias* on the one hand, and *Paralaea*, on the other, but differing from both by the presence of fovea of forewings.

Type *sciogramma*, Low.

CHLENOMORPHA SCIOGRAMMA, n. sp.

♂ and ♀, 28-30 mm. Head, palpi, antennae, and thorax dull slaty-fuscous, palpi darker beneath, antennal pectinations 10, apical portion simple. Abdomen yellow-ochreous. Legs whitish-fuscous, posterior pair whitish. Forewings elongate-triangular, termen oblique, rather prominent on vein 3; greyish-fuscous, somewhat slaty-tinged; markings hardly traceable; a fine crenulate line from just before middle of costa to before middle of dorsum, more pronounced on dorsum; an irregular whitish line, from three-quarters of costa to just before tornus, followed by a fine whitish crenulate line, from costa just before apex to tornus; a fine black interrupted line along termen; cilia grey, with a pale fuscous subbasal line. Hindwings faintly crenulate; grey-whitish; an indistinct fuscous line from costa at one-third to one-third dorsum; a fuscous discal dot; an obscure faintly waved fuscous line, from costa at three-quarters to two-thirds of dorsum, followed by a narrow obscure whitish shade; an obscure fuscous band before termen; line along termen and cilia as in forewings. Underside of both wings grey-whitish, a blackish band just before termen, well defined on both wings.

Hab.—One male, Broken Hill, New South Wales; two females, Pinnaroo, South Australia, all taken in November.

AMELORA LITHOPEPLA, n. sp.

♀, 30 mm. Head, palpi, and thorax ochreous-grey. Antennae ochreous. Abdomen greyish-ochreous, grey-whitish beneath. Legs grey-whitish, sparsely sprinkled with fuscous scales, middle and posterior tibiae and tarsi fuscous, banded with whitish. Forewings elongate-triangular, termen gently rounded; ochreous-grey; a narrow very outwardly oblique fuscous streak, from costa at about one-fifth, reaching about one-third across wing, indicating anterior line; a very obscure pale-fuscous mark at posterior end of cell; a very short dark-fuscous outwardly-oblique mark on costa at five-sixths, indicating posterior line; from each of the costal streaks there are faint indications of waved lines reaching dorsum at one-quarter and at tornus; cilia ochreous-grey. Hindwings grey, becoming fuscous-tinged around margins; a dull-fuscous discal spot; cilia grey. Hindwings beneath with an outwards

curved series of fuscous dots, from costa at five-sixths to just near tornus.

Not very near any other species of the genus.

Hab.—Dundas, Western Australia; one specimen, in October.

PAUROCOMA CONIOPA, n. sp.

♀, 28 mm. Head, palpi, antennae, and thorax dull ochreous. Abdomen grey. Legs ochreous-fuscous, posterior pair greyish. Forewings elongate-triangular, termen waved throughout, gently rounded; pale dull ochreous, more or less minutely irrorated with blackish scales; an obscure fine fuscous line, from two-fifths of costa to one-third dorsum, with two rounded projections above and below middle; a fine fuscous transverse discal dot; an obscure fascia-like fuscous shade, from five-sixths of costa to tornus; median third of wing somewhat lighter than rest of ground-colour; a fine waved blackish line along termen; cilia greyish-ochreous. Hindwings with termen as in forewings; grey-whitish, sparsely irrorated with some fine fuscous scales; line along termen as in forewings; indications of a fine waved fuscous line, from beyond middle of costa to beyond middle of dorsum; cilia whitish. Underside of hindwings with fuscous median discal dot, and submedian waved line very clear. Probably allied to *molybdina*, Low., but quite differently coloured.

Hab.—Broken Hill, New South Wales; one specimen, in May.

PYRALIDINA.

Subfamily PYRAUSTIDAE.

METALLARCHA THIOSCIA, n. sp.

♀, 20 mm. Head and thorax deep yellow. Antennae fuscous. Palpi yellow, terminal joint fuscous. Abdomen fuscous, ringed with deep yellow. Legs fuscous, posterior pair sprinkled with yellow. Forewings elongate-triangular, costa straight, termen oblique, gently rounded; dark fuscous; markings yellow; a broad dorsal streak, occupying half of wing, becoming narrowed at posterior end but continued to anal angle, where it joins a narrow streak along termen and continues almost or quite to apex; an irregular spot in cell, at one-fourth from base, a second, larger and somewhat sphenoid, in middle of wing, and a third, transverse, at three-quarters, just below costa, at four-fifths; cilia fuscous, with a darker basal line. Hindwings orange; a blackish discal spot; a moderately broad fuscous band along termen, becoming broader at apex, upper edge very slightly waved;

a narrow yellow streak along termen, sometimes obscure; cilia fuscous.

Nearest the following species, but distinct by the broad dorsal streak.

Hab.—Pinnaroo, South Australia; three specimens, in October.

METALLARCHA CLETHRODES, n. sp.

♀, 20-22 mm. Head and thorax yellow, head sprinkled with fuscous. Antennae and palpi fuscous, second joint of palpi beneath yellow. Abdomen fuscous, ringed with yellow. Legs fuscous, posterior pair sprinkled with yellow. Forewings elongate-triangular, costa straight, termen oblique, hardly rounded; orange-yellow, with shining fuscous markings; a narrow costal streak throughout; a small quadrate spot on lower edge of costal streak at one-sixth; an outwardly curved moderately thick fascia, from costâ at two-fifths to dorsum in middle; a somewhat similar, but thicker fascia from just before three-quarters of costa to dorsum before tornus, indented in middle, the indentation sometimes meeting previous fascia; a thick fascia along termen, from costa, where it is broadest, to termen above tornus, where it joins previous fascia; a narrow streak of groundcolour, from five-sixths of costa, and continued along termen to tornus; cilia dark fuscous, darker basally. Hindwings bright orange; a dark-fuscous discal dot; a dark-fuscous band along termen, moderately broad, becoming broadest at apex; a narrow line of groundcolour along termen; cilia as in forewings.

Allied to *Goudii*, Low., but differs in smaller size, palpi, thorax, and narrower markings.

Hab.—Pinnaroo district, South Australia; five specimens, October and November.

METALLARCHA GOUDII, Low. (Trans. Roy. Soc. S. Austr., 1902, p. 234).

Having obtained a nice long series of this species, I am redescribing it, as the original description is faulty.

♂ and ♀, 20-30 mm. Head, palpi, antennae, and thorax dark fuscous, basal joint of palpi beneath orange, patagia yellow. Abdomen fuscous, banded with orange-yellow. Legs dark fuscous, anterior coxae and posterior tarsi and tibiae sprinkled with orange. Forewings elongate-triangular, costa straight, termen oblique, gently rounded; deep yellow, with shining fuscous markings: a rather thick streak along costa, from base to apex, attenuated posteriorly, and emitting a flattened spot near base; a slightly outwards curved fascia, from costal streak at one-third to dorsum

before middle; a similar fascia from costal streak at three-fifths to dorsum at about three-quarters, strongly indented in middle, rarely reaching previous fascia, upper half much thicker; a fascia from about three-quarters of costa, reaching half across wing, thence curved around to meet preceding fascia just above indentation; whole of area of wing beyond this, excepting a narrow orange line along termen, filled in with light fuscous, minutely irrorated with yellow; cilia dark fuscous. Hindwings deep orange; a dark-fuscous discal spot; a moderately broad fuscous band along termen, strongly dilated on apical portion; a narrow orange line along termen, sometimes suffused with fuscous; cilia as in forewings.

Allied to *diplochrysa*, Meyr.

Hab.—Birchip, Victoria; two specimens. Pinnaroo district, South Australia; twenty specimens, in October and November.

TINEINA.

Family GELECHIADAE.

ARISTOTELIA PERIBAPTA, n. sp.

♂ and ♀, 18-20 mm. Head, thorax, antennae, and palpi pale ochreous, head paler, antennae of male minutely ciliated, about half. Abdomen pale ochreous-whitish. Legs ochreous-whitish, posterior tibiae very roughly haired. Forewings elongate, moderate, apex pointed; 7 and 8 out of 6; pale ochreous-yellow, margins minutely irrorated with darker ochreous; cilia ochreous, more or less mixed with light ferruginous. Hindwings with apex pointed, produced, termen sinuate; pale fuscous; cilia as in forewings.

Not near any other of the genus. Reminds one of *Nothris meliphanes*, Low.

Hab.—Henley Beach, South Australia; five specimens, in September.

EPIPHTHORA DELOCHORDA, n. sp.

♂, 18 mm. Head whitish. Thorax and palpi ashy-grey-whitish, palpi internally white. Antennae whitish, obscurely annulated with fuscous. Abdomen ochreous. Legs ashy-grey-whitish, posterior pair more whitish. Forewings narrow, acutely long pointed; ashy-grey-whitish; a narrow white streak along costa, from one-quarter to three-quarters; a narrow white streak along fold, obscured posteriorly; a fuscous outwardly oblique rather broad bar, from dorsum at one-third to termination of white streak along fold; cilia grey, becoming ashy-grey-whitish on apical portion. Hindwings with emargination obtuse, produced apex about one-quarter; grey, tinged with pale fuscous; cilia greyish.

Probably nearest *niphaula*, Meyr., but differs by shorter costal streak, narrower white streaks, and the oblique fuscous bar.

Hab.—Pinnaroo, South Australia; one specimen, in July.

Family TINEIDAE.

CHRYSORYCTIS (?) IDIOCHROA, n. sp.

♂, 20 mm. Head pale ochreous-yellow. Thorax white. Antennae ochreous. Palpi ochreous. Abdomen ochreous-orange. Legs ochreous. Forewings elongate, costa gently arched, termen very obliquely rounded; white; a fine ochreous line along costa from base to three-quarters; cilia pale ochreous. Hindwings dull ochreous-orange; cilia as in forewings. Underside of all wings dull ochreous-orange.

Probably nearest *ochracea*, Meyr.; the white forewings should make it easily recognizable.

Hab.—Broken Hill, New South Wales; one specimen, in January.

TRISYNTOPA, n. gen.

Head with appressed hairs. Antennae moderate, in male filiform, ciliations two, with strong basal pecten. Palpi moderate, curved, ascending, second joint tolerably smooth, terminal joint half of second, just reaching base of antennae. Abdomen moderate. Posterior tibiae rough-haired above and beneath. Forewings with veins 7 and 8 stalked, 7 to apex, 9 out of 7 above middle; 3 and 4 short-stalked. Hindwings over 1, subovate; 3 and 4 from a point, 5 approximated to 4, 6 and 7 parallel.

A curious genus not near any other known to me. The neural characters are somewhat abnormal for this group, but until further material is forthcoming it can remain here.

Type *euryspoda*, Low,

TRISYNTOPA EURYSPODA, n. sp.

♂, 25 mm. Head, palpi, and thorax ashy-grey-fuscous, palpi paler beneath. Antennae fuscous, annulated with darker, ciliations 2. Abdomen ochreous-grey, silvery-grey beneath. Legs silvery-grey, anterior and middle tibiae and tarsi infuscated. Forewings elongate, moderate, costa moderately arched, apex rounded, termen rounded; ashy-grey-whitish; veins, especially towards termen, more or less outlined with fuscous; an obscure elongate dot in cell; a second, more distinct at posterior end of cell; base of wing somewhat darker than rest; a somewhat obscure curved row of more or less disconnected spots just before and parallel to termen; cilia grey-whitish, basal half fuscous. Hindwings

grey-whitish, slightly fuscous-tinged around apex; cilia white, with a fuscous subbasal line.

Hab.—Broken Hill, New South Wales; one specimen, in October.

Family ELACHISTIDAE.

LIMNOECIA PYCNOGRAMMA, n. sp.

♂ and ♀, 20 mm. Head orange-yellow. Thorax orange-yellow, with a moderately large somewhat quadrate patch of fuscous on anterior two-thirds. Antennae fuscous, annulated with yellow. Palpi orange, terminal joint paler and mixed with fuscous anteriorly. Abdomen pale yellow. Legs fuscous, posterior pair yellow. Forewings elongate, moderate, costa gently arched, termen obliquely rounded; bright yellow, with purplish-fuscous markings; a rather thick oblique basal fascia, leaving a narrow streak of groundcolour at base; a broad median fascia occupying median third of wing, edges oblique, containing a somewhat triangular-shaped spot of groundcolour on costa, and sometimes a narrow outwardly oblique streak of groundcolour just above dorsum; a narrow streak along termen, dilated gradually to apex; cilia dark fuscous. Hindwings elongate-lanceolate, moderately broad; pale grey, finely irrorated with light fuscous; cilia orange-yellow.

Nearest *xanthopelta*, Low.

Hab.—Broken Hill, New South Wales; two specimens, in September.